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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/856,795	08/14/2001	Arnon Shani	U013484-1	3790
140	7590	11/17/2004	EXAMINER	
LADAS & PARRY 26 WEST 61ST STREET NEW YORK, NY 10023			JIANG, SHAOJIA A	
			ART UNIT	PAPER NUMBER
			1617	

DATE MAILED: 11/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

09/856,795

**Applicant(s)**

SHANI ET AL.

**Examiner**

Shaojia A. Jiang

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on August 31, 2004, July 21, 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 53, 56, 58-90, 92-96, 98-106, 109, 112 and 113 is/are pending in the application.
- 4a) Of the above claim(s) 64-69, 74, 83-88, 105 and 106 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 53, 56, 58-63, 70-73, 75-82, 89, 90, 92-96, 98-104, 109, 112 and 113 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on August 31, 2004 has been entered.

This Office Action is a response to Applicant's request for continued examination (RCE) filed August 31, 2004, and amendment and response to the Final Office Action (mailed April 21, 2004), filed July 21, 2004 wherein claims 53, 56, 58-63, 70-73, 75-82, 89-90, 92-96, 98-104, 109 and 112-113 have been amended; claims 1-52, 54-55, 57, 91, 97, 107-108, and 110-111 are cancelled.

Currently, claims 53, 56, 58-63, 70-73, 75-82, 89-90, 92-96, 98-104, 109 and 112-113, and 64-69, 74, and 83-88 (nonelected species), and 105-106 (nonelected invention) are pending in this application.

It has been indicated in previous Office Actions, December 3, 2002 and May 8, 2002, that Applicant's election with traverse of the invention of species of an alginate polysaccharide, a protein which is gelatin, a pheromone which is gossyplure, and a gellant which a calcium salt solution, was submitted February 12, 2002.

The claims have been examined insofar as they read on the elected specie.

Therefore, claims 64-69, 74, and 83-88 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim.

As discussed in the previous Office Action December 3, 2002, claims 105-106 drawn to the invention of a method for the sustained release of a volatile material and a method for treating a volatile material herein that is independent or distinct from the invention originally claimed of the invention originally drawn to the composition herein and the process for preparing the composition herein. The original invention and the claimed invention (claims 105-106) are separate and distinct, related as product and method of use,. See MPEP § 806.05(h). Moreover, According to MPEP § 706.07(h), Applicant cannot switch inventions in RCE.

Therefore, claims 105-106 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim.

Claims 53, 56, 58-63, 70-73, 75-82, 89-90, 92-96, 98-104, 109 and 112-113 are examined on the merits herein.

Again, note that this application is a 371 of PCT/IL99/00660 which claims priority to Israel 127396 (filed December 3, 1998). The certified copy of the priority has been filed with the instant Application.

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Applicant's amendment filed July 21, 2004 with respect to the rejection of claims 9-16 made under 35 U.S.C. 112 first paragraph for containing new subject matter which was not described in the original specification and claims, i.e., the omission of an essential element of the invention "wherein the polymer matrix comprises a protein and a polysaccharide" in claim 53 of record stated in the Office Action dated April 21, 2004 have been fully considered and found persuasive to remove the rejection since claims herein have been amended by adding the essential element of the invention "wherein the polymer matrix comprises a protein and a polysaccharide" to the claims.

Moreover, Applicant's remarks in regard to the limitations "the volatile component is released from the water insoluble bead in atmospheric air over a period comprising a plurality of hours" and "over a period comprising a plurality of days" in claims 112-113, have been fully considered and found persuasive that the specification is deemed to provide the support for these limitations.

Therefore, the said rejection is withdrawn.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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Claims 53, 56, 58-63, 70-73, 75-82, 89-90, 92-96, 98-104, 109 and 112-113 are rejected under 35 U.S.C. 103(a) as being unpatentable over Connick (4,401,456) and Nitto Electric Ind Co. (Abstract, JP58121212) in view of Cohen et al. (US 4,795,642, PTO-892) and Meinke et al. (Journal of Economic Entomology, 1989, Vol 82, 1830-1835).

Connick discloses water insoluble beads in a sustained release polymer matrix comprising droplets of an oil in water emulsion in a polymeric matrix (see col.2 lines 45-58 and Examples therein), surface active agents broadly, aliginate (the particular polysaccharide), bioactive material (one volatile hydrophobic component herein), and water, that have the same functions as claimed herein, i.e., known to release bioactive material or agents from the water insoluble beads into atmospheric air over a period times, e.g., hours or days; and the process for preparing such a sustained release, polymer, and water insoluble beads therein. Connick also discloses the size of beads therein is 0.1-5 mm, 0.8-2 mm, or 0.1-6 mm; and the gellant is a calcium solution; a bioactive material may be herbicide or insecticide. See abstract, col.1, col.3-4, col.5 lines 1-16, Examples 1-14 and claims 1-11.

Nitto et al. discloses a sustained release, polymer, and water insoluble gel-like body comprising sodium polyacrlate compound having at least one epoxy group per molecule, cationic surfactant, volatile substance which is in emulsion form, and water; the volatile substance which may be a perfume repellent, attractant, insecticide, and fungicide, is used in amount of 30% or less based on the total weight of the body. See abstract.

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The prior art does not expressly disclose the employment of gelatin in the beads of Connick, a sustained or controlled release system. The prior art does not expressly disclose that the particular volatile component may be pheromone such as gosspluer.

Cohen et al. discloses a controlled-release pharmaceutical composition in a unit dosage form comprising both gelatin and polysaccharide, co-solvents, aqueous solution, surfactants, for releasing pharmaceutical actives in an controlled or sustained manner and the process for making that (see abstract, col.2 lines 14-31, in particular Example I-II at col.6-7).

Meinke et al. discloses that the particular bioactive material, pheromone, is known to be used in a sustained release, polymer, and water insoluble delivery system for western corn rootworm. See abstract and the entire article.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to employ gelatin in the beads of Connick, a sustained or controlled release system, and employ the particular volatile component such as pheromone (gosspluer) in the instant claimed beads.

One having ordinary skill in the art at the time the invention was made would have been motivated to employ the particular surfactant such as a protein, gelatin, in the instant claimed beads, since first, surfactants are known to be used in the beads of Connick. Secondly, gelatin is a well known surfactant and well known in the art to be useful in a sustained release, polymer, and water insoluble delivery system, for example, the controlled-release pharmaceutical composition of Cohen et al. comprising

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both gelatin and polysaccharide, co-solvents, aqueous solution, surfactants, for releasing pharmaceutical actives in an controlled or sustained manner.

Therefore, one of ordinary skill in the art would have reasonably expected that gelatin would be useful in the delivery systems of Connick and Nitto as a surfactant.

Additionally, one having ordinary skill in the art at the time the invention was made would have been motivated to employ the particular volatile component such as pheromone (gosspluer) in the instant claimed beads since the employment of bioactive material broadly such as a perfume repellent, attractant, insecticide, and fungicide, is known in the delivery systems of Connick and Nitto. Pheromone as herbicide or insecticide is also known to be useful in a sustained release, polymer, and water insoluble delivery system for western corn rootworm. Therefore, one of ordinary skill in the art would have employed the particular volatile component such as pheromone in the instant claimed sustained release system.

Thus the claimed invention as a whole is clearly prima facie obvious over the combined teachings of the prior art.

Applicant's arguments filed on July 21, 2004, with respect to the rejection made under 35 U.S.C. 103(a) have been considered but are moot in view of the new ground(s) of rejection above.

In view of the rejections to the pending claims set forth above, no claims are allowed.



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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Jiang, whose telephone number is (571)272-0627. The examiner can normally be reached on Monday-Friday from 9:00 to 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sreenivasan Padmanabhan, Ph.D., can be reached on (571)272-0629. The fax phone number for the organization where this application or proceeding is assigned is 703.872.9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



S. Anna Jiang, Ph.D.  
Primary Examiner, AU 1617  
November 12, 2004